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We encourage our readers to consider submitting material on early North American numismatics to *CNL* for publication. In general, this includes coins, tokens, paper money, and medals that were current before the U.S. Federal Mint began operations in 1793. However, there are certain pieces produced after the 1793 date that have traditionally been considered part of pre-Federal numismatics and should be included. We cover all aspects of study regarding the manufacture and use of these items. Our very knowledgeable and friendly staff will assist potential authors to finalize submissions by providing advice concerning the text and help with illustrations. Submissions in either electronic or hard copy format, should be sent to the editor via the e-mail address given above or through the ANS at their postal address. Electronic text submissions should be formatted in Word with separate grayscale images.



Editorial

This summer, North America has certainly experienced its share of Dog Days—the old nickname for the hot and humid days of July and August. The name for this period goes back to the ancient Greeks and Romans, who considered the Dog Days to begin with the heliacal rising of Sirius (the Dog Star). It was believed that the rage of this star was the cause of the unpleasant heat as well as disease, and annual attempts were made to appease it through sacrifice already in April.

As a term, the Dog Days survived the fall of Rome and the development of the early modern Europe. According to the *Clavis Calendaria* (1815) of John Brady, at the beginning of the eighteenth century, this period of the summer was still widely regarded as an evil time when "the Sea boiled, the Wine turned sour, Dogs grew mad, and all other creatures became languid; causing to man, among other diseases, burning fevers, hysterics, and phrenesies." In England, the Dog Days were listed in the lectionary calendars of the Anglican *Book of Common Prayer* (1552 and 1559 editions) and the King James Bible (1611) and officially extended from July 6 to September 15 (Old Style). It has been suggested that the name for this period of summer was exported to the early English colonies of North America (especially Virginia) through the influence of these religious works.

In honor of the Dog Days, it is my great pleasure to present John Kleeberg's extensive discussion of Dutch *Leeuwendaalders* (Lion Dollars), which were sometimes known as "Dog Dollars" in the American colonies. His

detailed treatment of the international trade mechanisms through which these coins entered the circulation pool of North America is a real eye-opener and is sure to spark further thought and discussion.

This issue also continues the series of plates describing and illustrating the ANS holdings of FUGIO coppers (Newman 15-Y to 22-M), Connecticut coppers (Miller 1786 1-A to 1-A.1), and New Jersey coppers (Maris 38-c to 43-Y), and the silver coins of Massachusetts Bay (Oak Tree shillings Noe 1 to 5 / Salmon 1-A to 3-D).

Oliver D. Hoover
CNL@numismatics.org

Two important colonial numismatic works now available for pre-order from the ANS:

New Jersey State Coppers by Roger S. Siboni, John L. Howes, and A. Buell Ish

As William Sheldon eloquently put it in Penny Whimsy,

Old copper, like beauty, appears to possess a certain intrinsic quality or charm... [with] an almost living warmth and personality not encountered in any other metal.... You see rich shades of green, red, brown, yellow, and even deep ebony: together not elsewhere matched in nature save perhaps in autumn leaves....

New Jersey State Coppers shows that never were these words more true than in the case of the coins struck for New Jersey by Thomas Goasby, Albion Cox, Walter Mould, and Matthias Ogden. By way of introduction, the authors fully discuss the often tumultuous history of the New Jersey copper coinage and its creators alongside the equally compelling story of the men, like Dr. Edward Maris, who first appreciated the "living warmth and personality" of the coins and formed the great collections of the nineteenth and twentieth centuries. Every known New Jersey die variety is presented in minute detail with lavish enlarged full-color illustrations, condition censuses, as well as commentary on die states and other notable features.

The authors also include such supplementary material as the original documents related to the eighteenth- century coining venture, imitations created for the collector market in the nineteenth century, as well as suggestions for developing a personal collection. *New Jersey State Coppers* will surely become the primary tool for the study of this coinage and the basis for deepening the understanding and appreciation of its charm as old copper.

From Crime to Punishment: Counterfeit and Debased Currencies in Colonial and Pre-Federal America by Philip L. Mossman

Ever since coinage was developed in ancient Lydia, an element of society has sought to debase the coin of the realm for personal gain not only by counterfeiting, but also by shaving away precious metal. Currency debasement was not confined to the proletariat since throughout history various monarchs increased their royal revenues, or seigniorage, by reducing the quality of the coins' specie content or its weight standard. The current text follows closely the course of royal English copper coinages whose high potential profit made them an ideal prey for counterfeiters. These forgeries flowed freely into the colonies where they overwhelmed, and eventually collapsed, the small change medium but not before various states sought to correct the evil of this imported copper trash.

Great attention is paid to Great Britain's mercantilistic policies which shaped the character of the currency in the North American colonies where chronic hard money shortages encouraged counterfeit coinages of all stripes whose actual manufacture and circulation is examined in great detail. Colonists further sought to expand their monetary pool by printing bills of credit to meet the exigencies of the French and Indian Wars. This new paper currency likewise became the target for forgery and a battle royal ensued between the colonial treasurers and bands of counterfeiters as they competed to outsmart each other. But as "the weed of crime bears bitter fruit," many counterfeiters were apprehended and punished for their evil deeds.

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**The Circulation of *Leeuwendaalders* (Lion Dollars)
in England's North American Colonies, 1693–1733**
by
John M. Kleeberg; New York, NY

I. The Dutch Origins of New York City and State

A little over four hundred years ago, in 1609, Henry Hudson, searching for a new route to the Orient on behalf of the Dutch East India Company (*Vereenigde Oost-Indische Compagnie*, VOC), discovered the Hudson River and sailed up the river as far as Albany (Burrows and Wallace 1999, 14–18). New York Harbor had previously been discovered in 1524 by the explorer Giovanni da Verrazzano and given the title of *Nouvelle Angoulême* (Burrows and Wallace 1999, 11), and the bay was visited by other explorers before Hudson (Burrows and Wallace 1999, 11–12), but it was only Hudson's discoveries that led to a permanent European settlement by the Dutch West India Company (*Geocroyerde Westindische Compagnie*, GWC). The GWC established the town of Nieuw Amsterdam in 1625 (Burrows and Wallace 1999, 21, 23–24). Nieuw Amsterdam remained under Dutch control until English conquest in 1664 (Burrows and Wallace 1999, 72–73); a short period of Dutch re-conquest in July 1673 lasted only until October 1674 (Burrows and Wallace 1999, 82–83).

Although actual Dutch control only lasted four decades, the Dutch origins of New York City remain a matter of great pride in the city. Wills in the Dutch language were filed with New York City's probate court (the Surrogate) as late as the 1690s (personal observation). For most of the eighteenth century the Dutch Reformed Churches of New York State continued to hold services in the Dutch language (Balmer 1989). New York City's flag is based on the older version of the Dutch flag (with the colors orange-white-blue rather than red-white-blue) and these orange and blue colors are used by three local sports teams (the Mets, the Knicks, and the Islanders) and on signage in municipal housing and parks. The last Director-General of the Dutch colony, Petrus Stuyvesant, is commemorated by a housing development, several streets, a Brooklyn neighborhood, the city's most prestigious high school, and even a heating oil company. Street names (Bowery = *bouwerij*, an older form of the word *boerderij*, meaning "farm," from where Stuyvesant's farm was located) and neighborhoods (Harlem, Flushing, Brooklyn, New Utrecht) recall the city's Dutch origins. Families of New York Dutch descent have supplied the United States with three presidents (Van Buren and the two Roosevelts). A room from a Dutch farmhouse in Albany County, the Daniel Pieter Winne House, is on exhibit at the American Wing of the Metropolitan Museum of Art, as is the Great Hall (built 1765–1769) of the manor of Stephen Van Rensselaer II, the patroon of Rensselaerswyck. Sadly, the last remnants of Dutch urban buildings in New York City disappeared in the city fire of 1835; the only remains of Dutch-type architecture in New York City are outlying farmhouses (the Dyckman and Wyckoff houses).

Popular accounts of the history of the Dutch colony contend that although Dutch rule was only for a brief period, it created a society based on tolerance and diversity that made an essential contribution to what the United States is today (Shorto 2004, 310–318). Despite the superficial attractiveness of this theory, the comparative history of other colonies founded by the Dutch in the seventeenth century—Indonesia, the Netherlands Antilles, and South Africa (settled by Jan van Riebeeck in 1652)—means that it cannot be accepted without reservation. The Dutch built Curaçao up into the major slave market in the Caribbean. The Dutch novelist Multatuli, in his novel *Max Havelaar*, described terrible conditions in the Netherlands East Indies (now Indonesia) and condemned Dutch colonialism as particularly oppressive.

In fact, as has been shown by Evan Haefeli's study of New Netherland, the idea of Dutch tolerance is something of a delusion. What the Dutch colony actually permitted was "freedom of conscience"—people could think what they liked, so long as they kept their opinions to themselves. This freedom, however, did not allow non-Calvinist religions to practice in the public sphere, even though those religions often regarded public actions as necessary to achieve salvation. Lutherans were forbidden from using their own rite to baptize children; Catholics could not stage processions; Jews were not permitted to build synagogues; and Quakers banned from challenging Calvinists to public disputations. Amsterdam, back in Holland, was a tolerant city, but Amsterdam was atypical; Nieuw Amsterdam and the rest of the New Netherland colony actually resembled the rural Netherlands in its insistence upon an official Reformed Church and the accompanying intolerance (Haefeli 2012). Religious tolerance in British North America actually took root with the founding of the Quaker colonies (Pennsylvania, Delaware, and West New Jersey). As Voltaire pointed out in his book about the English (published for the first time in French in 1734, and promptly burnt by the Paris public executioner because of its subversive ideas), a society that could tolerate the eccentric Quakers, with their pacifism, plain speaking, odd dress, emancipated women, and refusal to take oaths, could tolerate pretty much anything (Voltaire 1964).

II. Evidence for the Circulation of *Leeuwendaalders* (Lion Dollars)

A. Introduction

Although Dutch influence was strong and long lasting in New York City and State, this does not mean that Dutch coinage circulated in the Dutch colony. In the modern world "currency follows the flag" (Chalmers [1893], 4), but that was not the case in the seventeenth and eighteenth centuries. It was not the nation that struck the coins that mattered, but the coins' intrinsic metal content. New York was settled by the Dutch and Delaware by the Swedish, but settlers in all colonies used gold coins from Portuguese Brazil, silver coins from Spanish America, and copper coins from Great Britain rather than coinage from the Netherlands or Sweden. An English settler in Massachusetts was more likely to encounter 8-reales from México than an English shilling minted in London.

An apparent exception to this rule is the circulation of *leeuwendaalders* (lion dollars) in the colony of New York. The assertion is not infrequently made in auction catalogues and elsewhere that *leeuwendaalders* circulated in New York because of the colony's Dutch origins. This is not correct. The heyday of the circulation of *leeuwendaalders* was not during Dutch rule, before 1664, but the period 1693–1733. Furthermore, the circulation of *leeuwendaalders* was not restricted to New York, but circulated all over the eastern seaboard from South Carolina as far north as New York (New England is an important exception). Finally, *leeuwendaalders* entered the circulation of the North American colonies not because of a Dutch tradition (or indeed, because of any direct trade with the Dutch), but rather because of a comparatively little known North American trade in the Indian Ocean: The Madagascar trade. These conclusions arise from a thorough review of the evidence for the circulation of *leeuwendaalders*. The evidence includes an issue of paper money by the Colony of New York; coin hoards; one shipwreck—that of *HMS Feversham*; and, most importantly, nearly forty literary references (particularly in legal statutes).

B. Paper Money Issued in Terms of *Leeuwendaalders*, 1709

In 1709 the Colony of New York issued paper money for the first time. The issue of November 1, 1709 included notes in the denominations of 4, 8, 16, and 20 "Lyon dollars" (Fig. 1, below; Newman 2008, 272). This is the earliest colonial American paper money to name a specific coin

in its redemption terms; other issues had promised redemption in "silver plate," but not in a specific coin—i.e. redemption by weight and not by tale. This is understandable, because the commonest coins in circulation at this date, the Spanish-American 8-reales, only existed in the form of the crude cobs, rather than the comparatively well struck *leeuwendaalders*. Once the Spanish-American mints installed minting machinery to strike their 8-reales (México: 1732, Santiago de Chile: 1751, Lima: 1752, Guatemala: 1754, Bogotá: 1759, Potosí: 1767), Spanish milled dollars began to be used as the metallic backing for paper money. Redemption by tale in Spanish milled dollars rather than by weight commences with an issue of New Hampshire in 1755 (Newman 2008, 235).

C. Coin Finds containing *Leeuwendaalders*

Numismatic Finds of the Americas (NFA) lists four finds containing *leeuwendaalders*: One single find, two coin hoards, and one shipwreck. The single find was a *leeuwendaalder* of 1655, province not indicated, found in Portland, Maine in 1849 (NFA 99). A hoard found in Elizabethport, New Jersey, consisted of at least one *leeuwendaalder* (date and province not indicated) and 8-reales from Potosí, of which the latest coin was dated 1694 (NFA 161). The other hoard is the Castine Deposit, concealed in 1704 and found in Castine, Maine in 1840–1841, which contained at least two *leeuwendaalders*, one from Gelderland, dated 1641, and the other from an unknown province but dated before 1620 (NFA 178).

In his stimulating study of the Castine Deposit, Thomas Kays has presented two alternative dates of deposit of the hoard: 1704 or 1779 (Kays 2005, 2866). The bulk of the Castine Deposit comprised French silver écus of Louis XIV. Because of the financial turmoil at the end of the reign of Louis XIV and during the system of John Law, French gold and silver coinage underwent a series of drastic monetary reforms (see Mossman 2009 for a discussion of the

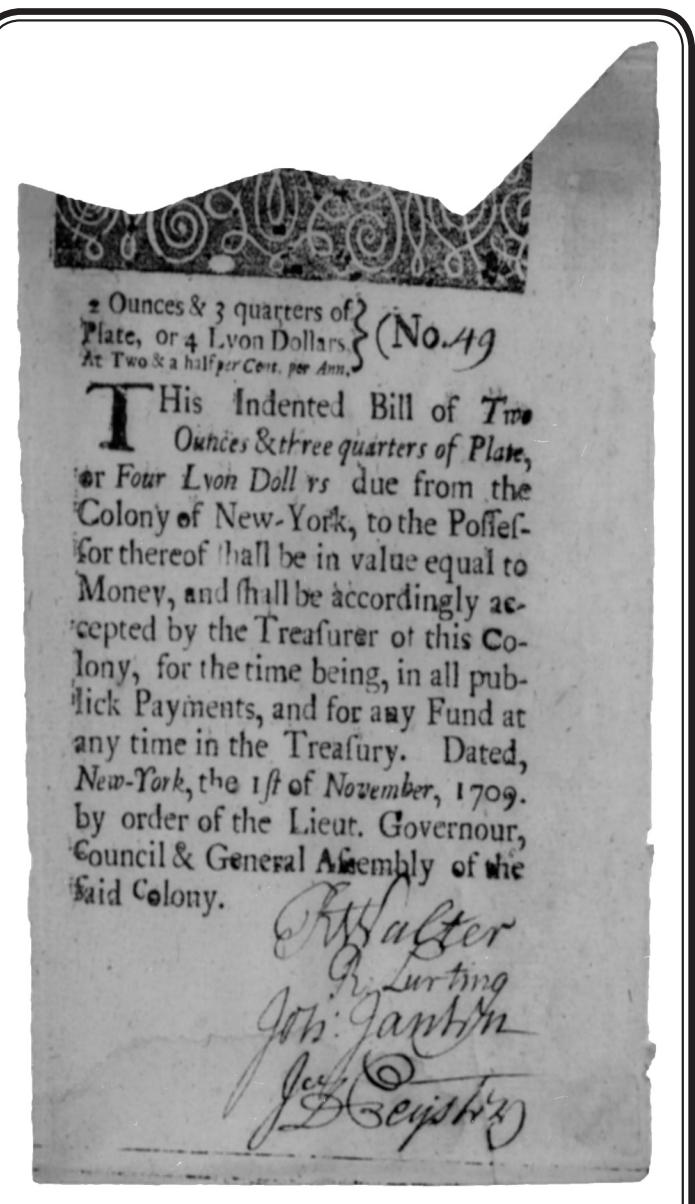


Figure 1. November 1, 1709 New York indented bill denominated in Lyon Dollars." Courtesy of Tony Terranova.

changes to the French gold coinage). As a result, nearly all French silver hoards of the middle and late eighteenth century have no coins earlier than 1726 (Droulers 1980); Castine, on the other hand, mostly contains écus of Louis XIV, with the latest date recorded being 1690. Thus it must have been deposited before 1726, and therefore we will adopt 1704 as the date of deposit.

The best-documented find of *leeuwendaalders* is the shipwreck of *HMS Feversham*, which took on £569/12/5 sterling worth in coin to pay for provisions in New York on September 4, 1711, and wrecked off Cape Breton, Nova Scotia, on October 7, 1711 (NFA 185). 1,384 silver coins have been recovered from this shipwreck; these silver coins include 14 *leeuwendaalders* and 9 half-*leeuwendaalders* (thus the *leeuwendaalders* amount to only 1% of the silver coins recovered; adding in the half-*leeuwendaalders* increases the proportion to 1.7%). The 14 *leeuwendaalders* were: Friesland 1610; Gelderland, 1644 and 1652; Holland, 1576 and 1589; Utrecht 1663; West Friesland 161x, 1640, and 1641; Zeeland no date; and Kampen 1649, 16xx (2), and 1667. (It is interesting to note that the last coin dates from after 1664, when Nieuw Amsterdam had been conquered by the English and re-named New York.) The 9 half *leeuwendaalders* were: Gelderland, 1632 and 1641; Holland, 1617 and no date (2); Utrecht, 1616, 1640, and 1647; and Zeeland, 1642. These coins were sold at an auction held at Christie's, New York, on February 7, 1989 (Christie's 1989, lots 852–869).

The high proportion of half *leeuwendaalders* from the Feversham wreck is notable—39% of the *leeuwendaalder* issues. This contrasts with what Arent Pol noted for the Qabatiya hoard, where there were only 7 half *leeuwendaalders* as opposed to 300 full *leeuwendaalders* (slightly more than 2%). Pol has also noted from archival records that the proportion of half-*leeuwendaalders* struck is known to be a small proportion of the total mintage of *leeuwendaalders*, usually only 5–11%; in one time period, 1597–1599, the proportion rose, exceptionally, as high as 35% (Taha, Van der Kooij, and Pol 2006, 55).

D. Legislative and other Literary References to the Circulation of *Leeuwendaalders*

1. The Background to the Legislation Setting the Value of *Leeuwendaalders*

Nearly forty references in literary sources evidence the circulation of *leeuwendaalders* in North America. Most of these literary references are statutes or legislative proceedings that set the value of the *leeuwendaalder* in the colonial monies of account—the colonial pounds, shillings, and pence that varied from one colony to the other. The earliest decree fixing the values of coins of any kind that is preserved in the colonial records is this one of September 27, 1642 (Felt says September 8th) by Massachusetts:

This Cort, considring the oft occasions wee have of trading with the Hollanders at the Dutch plantation & otherwise, do therefore order, that the Holland ducatour, worth 3 gilders, shalbee currant at 6s in all paymts wthin our iurisdiction, & the rix dollar, being 2½ gildrs, shalbee likewise currant at 5s, & the ryall of 8 shalbee also currant at 5s" (Felt 1839, 26; Shurtleff 1853, 2: 29; Crosby 1875, 29–30).

The coins referred to in this decree are the *ducaton* from the southern provinces, the Spanish Netherlands (now Belgium), which contains .9857 ounces of silver, and the Dutch *rijksdaalder*, which contains .8260 ounces of silver (Cuhaj 2011, 1394, 1507). The *ducaton* coin that would be struck by the northern provinces, which is also known as the silver rider (*zilveren rijder*), did not begin to be struck until 1659, so it cannot be mentioned in a statute of 1642. It is important to note that this decree of 1642 makes no mention of the *leeuwendaalder*, even though the motive given for the decree is "trading with the Hollanders at the Dutch plantation"—a further indication that *leeuwendaalders* were not in common use at Nieuw Amsterdam.

The statutes setting the exchange rate for foreign coin multiplied rapidly in the last third of the seventeenth century. The North American colonies were powerfully affected by the debasement of the coinage by crooked mint officials at Potosí in the 1640s (Menzel 1995; Menzel 2004, 296–298). Philip Mossman has written extensively on this issue, but as will become clear, this section disagrees with Mossman's conclusions (see especially Mossman 2008, 3303–3309). The debased pieces led to a loss of confidence in all Spanish coinage. John Hull in his diary gave the cause for the coinage as "Also upon occasion of much counterfeit coin being brought in the country, and much loss accruing in that respect (and that did occasion a stoppage of trade)" (Crosby 1875, 31). Philip Mossman has argued that when John Hull used the term "counterfeit," he must have meant "fake coins made by private, illicit counterfeiters" and not "coins adulterated by crooked assayers at the Potosí Mint," but there is no reason to believe that Hull made or, indeed, could have made such a distinction. The amount of "counterfeit coin" must have been massive to cause a "stoppage of trade," an amount of production beyond the capacity of a small scale illegal counterfeiting operation, and exactly what would correspond to what we know of the 1640s debasement, which caused a crisis, indeed a "stoppage of trade," throughout Spanish America (Menzel 1995; Menzel 2004, 296–298), in Ireland (Mossman 1993, 56), in Flanders and in Holland (Cunietti-Ferrando 1986, 141), in France (Cunietti-Ferrando 1986, 141; Mossman 2008, 3296–3298), in Florence (Shaw 1894, 95) and in Venice (Kleeberg and Bernardelli 1998, 374, discussing the decree issued during the reign of Doge Francesco Molin [1646–1655]), indeed wherever Spanish coins were found in general circulation. In Spanish-America and at Antwerp in the Spanish (Southern) Netherlands, confidence had to be restored by elaborate counterstamping operations (Spanish-America: Christensen 1986; Leonard 1989; Menzel 1995, 11–14; Menzel 2004, 298–302; Antwerp: De Witte 1894; Mertens and De Donder 1958; Hoc 1960). With a loss of confidence in all Spanish coin, the time was ripe to establish the Massachusetts mint. In that same year, 1652, the Spanish authorities reacted to the crisis, melted down the most debased coinage, decreed that the less debased coinage could pass at 6 *reales* rather than 8 *reales*, and introduced a new coin type, the pillar type, which replaced that of the great shield era of Potosí (Menzel 1995; Menzel 2004, 296–316). It took time for these measures to regain the lost confidence. By 1680, however, the Boston mint was attacked on the grounds that "...the impress adds nothing to the intrinsick value, a spanish Cross in all other places being as well esteem'd as a New England pine" (Crosby 1875, 109). If a merchant received Spanish coin in 1680, the merchant would not bring it to the Boston Mint, for not only was the Boston Mint not a charge-free mint (Jordan 2002, 46–53), but even if it had been, the merchant would have lost interest on the money deposited while waiting for the silver to be re-coined. In 1652, by contrast, the Spanish Cross was held in no esteem at all, which is why the New England Pines were issued.

As the situation became clearer, colonial governments could restore confidence in the currency by setting prices for good Spanish coins. The earliest such declaration found dates from 1668. The Spanish coinage was referred to by four names: Mexico, Pillar, Seville, and Peru. Mexico coins were those from the mint of México, which could readily be distinguished by the peculiar cross on the reverse, a combination of *croix pattée* and *pommée*. (The four knightly orders of Spain, the orders of Santiago, Calatrava, Alcántara and Montesa, all use heraldic crosses that end in lilies—the *croix fleur de lisée*—and the cross on Mexican silver coinage may be an attempt by the mint to reproduce the crosses of these knightly orders.) Pillar coins were the new coinage issued from Potosí and Lima from 1652 onwards, which had pillars on the obverse. (Other issues from Spanish mints with pillars, such as the early issues from the mints México and Lima, and the coinage from the Nuevo Reino of what became Colombia, would be so rarely encountered in circulation that it is unlikely that they were also comprehended under the term "pillar.") Seville coins were coins from the Spanish mainland, since Seville was the most productive mint; these could be distinguished by the shield of Portugal superimposed in the upper part of the obverse shield, and by the omission of INDIARVM from the reverse inscription.

Mexico, Pillar, and Seville coins were all high quality silver of .9305 fine. Statutes and other legislative measures using the terms Mexico, Pillar and Seville are recorded from 1668, 1672, 1682, 1692, 1696, 1697, 1704, 1708, 1710–1715, 1720, and 1722 (Felt 1839, 39, 41, 44, 55, 59; Crosby 1875, 80, 84, 85, 99–100, 117–118, 289; *Colonial Laws* 1894, 1: 620, 711, 749–750, 753, 761, 779, 788, 812, 814, 847, 1013; 2: 5, 17, 92–93).



Figure 2. A 1639 *leeuwendaalder* of Zwolle with an especially dog-like lion reverse. Courtesy of the author.

Peru coins referred to the coins of the great shield era of Potosí, which ended ignominiously with the criminal debasement of the 1640s (Menzel 2004, 235–298). These coins could be recognized by the shield lacking the superimposed shield of Portugal on the obverse and the additional inscription INDIARVM on the reverse. A few statutes include the Peru coins, but at a lower valuation than the Mexico, Pillar, and Seville coins. One undated document from Massachusetts, but dated by Joseph Felt to 1671, prescribed that Mexico, Pillar and Seville 8-reales were to be valued at 6 shillings 8 pence, but Peru 8-reales were to be valued at 6 shillings (Crosby 1875, 106–107; note that this document contradicts Mossman 2008, 3308). Chalmers cites the following statutes that include the Peru coins from the Caribbean: Montserrat (1670), Antigua (1672), Nevis (1672) (Chalmers 1893, 64), the Leeward Islands (1694) (Chalmers 1893, 65; Mossman 2008, 3302), Antigua on its own again (1699) (Chalmers 1893, 66–67; Mossman 2008, 3302) and Jamaica (1681) (Chalmers 1893, 99; Mossman 2008, 3302). The Peru coins are also mentioned in statutes or other documents from, besides Massachusetts, South Carolina (1695: Cooper 1837, 2: 95), Virginia (1708: Oldmixon 1708, 316), Pennsylvania (1700: Mitchell and Flanders 1896, 2: 88), and New York (1708: *Colonial Laws* 1894, 1: 620–621).

When *leeuwendaalders* irrigated into North American circulation in the 1690s, they were met with great mistrust, for the coins are heavily debased: They are only .750 fine silver, the remaining quarter being copper. New York merchants in 1705 referred to them as "not well known in value intrinsick" and stated further that "none here can judge of their value" (NYCD 1854, 4: 1134–1135). To reassure the suspicious merchants, numerous statutes set a value on *leeuwendaalders*. The debased Peru coins had paved their way. In Queen Anne's Proclamation of 1704 (6 Anne, c. 57), the Peruvian coins were stated to weigh 17 pennyweights 12 grains (Chalmers [1893], 414); the Spanish authorities deemed these coins to be worth 6 *reales* rather than 8 *reales* (coins that were even more seriously debased than this had been melted down by the Spanish authorities) (Menzel 2004, 298). If the Spanish authorities were correct in believing that the coins were, on average, 25% debased from the .9305 standard, the debased Peruvian coins would have had 19 grams of pure silver. As will be shown below in discussing the statutes of the Colony of New York, the *leeuwendaalders* in circulation there had about 19.8 grams of pure silver. The two coins were so close in value that the numerous statutes that value Peru coins and *leeuwendaalders* at the same exchange rate were entirely justified.

The coins are sometimes referred to in the statutes as lion dollars; since the lion on some of the cruder *leeuwendaalders* looks like a dog, another term used in North America was "dog dollars" just as the Arabs called the *leeuwendaalder* "the father of the dog" (Abu Kelb) (Vom

Taler zum Dollar 1986, 98). Indeed, it is probable that the American usage arose as a direct translation of the Arab term, since, as will be shown below, the leading American source for *leeuwendaalders* was the Arab trading world of East Africa and the Red Sea. Occasionally the coins are just called "Dutch dollars."

2. The Literary Evidence Arranged by Colony (South to North)

a. Antigua in the Leeward Islands

In 1699, the British colony of Antigua in the Caribbean decreed that *leeuwendaalders* and Peruvian coins alike were to be worth 5 shillings each (Chalmers [1893], 67).

b. South Carolina

In January 1695 South Carolina decreed that "Mexico Pillar...Peru Lion Dollars and other coynes containing full thirteen penny weight troy and upwards" were to be worth five shillings (Cooper 1837, 2: 95). The statute would make no sense if the debased Peru and Lion dollars were rated at the same value as the good Mexico and Pillar pieces, since South Carolina would then be flooded with debased Potosí coins and *leeuwendaalders*, and denuded of all its good Spanish silver; so the missing words in the statute, in addition to the obvious missing word "Seville," probably included a higher valuation for Mexico, Pillar, and Seville, such as 6 shillings. In June 1700, the Earl of Bellomont, the governor of New York, questioned Nicholas Meers, a captain of a vessel recently arrived from South Carolina and "a sober understanding man," about the business prospects of South Carolina: "I ask'd about the value of money in Carolina, as a thing proper for me to know to make my computation more just; he told me there was much disorder in that, that the Dog Dollars, Rix Dollars, and the Seville, Pillar and Mexico pieces of Eight have a currency there, but not at a fix'd standard in value, they going with some people for more, with others for less" (NYCD 1854 4: 699).

c. North Carolina

North Carolina in 1715 decreed that "all Lyon Dollars shall pass Current in all payments within this Province and be Deemed Equal to three Bushalls of Indyan corn and so proportionatly for any other of the Rated Comoditys" (Clark 1904, 23: 80).

d. Virginia

In April 1697, Accomac County on the Delmarva Peninsula petitioned the Virginia House of Burgesses to set a rate for "Lyon or Dog Dollars" so that they could be used in circulation (Palmer 1875, 1: 52). John Oldmixon, in his history of the British Empire in America published in 1708, stated that in Virginia "Pieces of Eight (except of Peru)" were worth 5 shillings, but "Peru Pieces of Eight, and Dutch Dollars" were worth 4 shillings (Oldmixon 1708, 316).

e. Maryland

In December 1708, the Assembly of Maryland prescribed that "Dog Dollars" were to pass at four shillings and sixpence Maryland currency, since there was "at Present little other money in this province" other than those coins (Browne 1907, 351). In the form that this bill reached the legislative council, "Dog Dollars" were to be current at five shillings. Maryland's legislative council, however, rejected the bill from the Assembly on the grounds that receiving *leeuwendaalders* at five shillings, one third more than the "intrinsick Value," would conflict with

Queen Anne's law forbidding the further "crying up of money" (Browne 1907, 243, 297–298; Queen Anne's law is 6 Anne, c. 57; Mossman 1993, 48–53).

There is also the record of at least one ostensible burglary involving *leeuwendaalders*. In 1718 Hester Oldfield of Annapolis, Maryland, was indicted by an overzealous prosecutor, William Bladen, for stealing six Spanish gold *pistoles* (= 2-*escudo* pieces), one Spanish gold half-*pistole* (= *escudo*), one "Chequin or Arabian Peice of gold," one English gold guinea, one Portuguese piece of silver, and "Divers Dog Dollars Spanish Peices of Eight and other Silver mony." After conviction she and her accomplice, Hester Smith, were branded with the letter "T" on the hand (thus these ladies must have claimed benefit of clergy; they thereby escaped hanging for their theft, and were branded instead) (Ellefson 2007, 169–170, 211 n.146).

f. Pennsylvania

In November 1700, Pennsylvania passed a law stating that "every Peru piece of eight, not less than twelve pennyweight, and all Lion or Dog Dollars," were to be worth six shillings; all other pieces of eight, and dollars above fifteen pennyweight, were to be worth seven shillings (Mitchell and Flanders 1896, 2: 88). Pennsylvania's Act, however, was vetoed by the Queen in Council on July 30, 1703, partly because Maryland complained that the high rates Pennsylvania was offering were attracting all the coin into Pennsylvania and out of Maryland (Mitchell and Flanders 1896, 2: 445–446). Pennsylvania then tried to pass again what was effectively the same law, making *leeuwendaalders* and the debased Potosí pieces worth six shillings on January 12, 1705/6 (Mitchell and Flanders 1896, 2: 276–278); but the Queen again vetoed the law on October 24, 1709 (Mitchell and Flanders 1896, 2: 278, 534).

There are two cases from Pennsylvania involving the counterfeiting of *leeuwendaalders*. In the summer of 1730, Zachariah Field was arrested and convicted in Philadelphia for counterfeiting lion dollars (Scott 1955, 149). In May 1733, James Black was arrested in Philadelphia for passing two counterfeit lion dollars, but was acquitted at trial (Scott 1955, 28).

g. New Jersey

In October 1693, the Assembly of West Jersey decreed that "dog dollars not clipt" were to pass at 6 shillings; the rationale was given that it was inconvenient that West Jersey's money had differed from that used in Pennsylvania, and the new rates of foreign coins were designed to remedy this (Lee 1892–1893, 33).

In May 1698, Josiah Stanburrough, a planter from Elizabethtown in what was then East New Jersey, was convicted of having passed, on February 20, 1697/8, and on previous occasions, counterfeit "Dogge Dollars" and other counterfeit coins. Stanburrough was sentenced to a fine of £20 in New Jersey money (equal to \$66.67), plus the costs of court – an extraordinarily mild penalty given that counterfeiting is actually a capital offense (Edsall 1937, 311–312). In this case the New York City lawyer James Emott crossed over the Hudson River to serve as prosecutor. Like some lawyers, Emott played both sides of the law, for although he acted as prosecutor here, he is better known to history as the close associate and friend of the pirate Captain William Kidd (Ritchie 1986, 70, 163, 173, 176–177).

h. New York

The Colony of New York, noting that the circulation of *leeuwendaalders* had spread in great numbers from South and North Carolina and Pennsylvania over the entire Eastern Seaboard, but their value was little known, decreed in March 1693 that the coins should pass at 5 shillings

6 pence in New York currency: "Lyon dollars a coin here not well known in value intrinsick, which had spread themselves from Carolina and Pennsylvania into all the Country, should pass at 5s 6d" (NYCD 1854, 4: 1134). In 1705, a petition of New York merchants observed to Lord Cornbury, the governor of New York, and to the English colonial administrators that if New York were to observe the ban on revaluing 8-reales ("crying up" money) imposed by Queen Anne (6 Anne, c. 57; Mossman 1993, 48–53), all the 8-reales would be attracted to Boston because Boston could be counted on to evade the ban, leaving New York with only *leeuwendaalders* and coppers: "We can expect nothing to tarry with us but Lyon dollars, whereof none here can judge of their value, and pence, which the people of Boston have always avoided" (NYCD 1854, 4: 1135). One of the signers of this petition was Giles Shelley, a captain active in the Madagascar trade who (despite what the petition asserted) knew very well the value of *leeuwendaalders* and whom we shall meet again.

In October 1708, the Colony of New York passed another law rating *leeuwendaalders* at 5 shillings 6 pence, although this later law was vetoed by Queen Anne in March 1708/9 (NYCD 1855, 5: 66–68, 71; *Colonial Laws* 1894, 1: 620); notice of this veto reached New York on July 2, 1709 (Fernow 1902, 230). In 1719, a proposed bill entitled, "An Act to Ascertain the Value of Lyon Dollars," which had been passed by the New York House of Representatives, was rejected on its second reading by the upper legislative chamber, the Governor's Legislative Council (Journal 1861, 1: 448). However, in 1720, a proposed bill which had been passed by the New York House of Representatives, entitled "An Act directing and appointing the Value that Lyon Dollars shall pass Current for in this Province," passed the first reading before the Legislative Council, and became law in 1720 (Journal 1861, 1: 454; *Colonial Laws* 1894, 2: 5).

Leeuwendaalders do not appear in one document that gives us a most vivid picture of colonial Dutch New York, the estate inventory of Margrieta van Varick (died 1695) of 1696–1697 (Krohn and Miller 2009). Although the silver coins of her estate are not described in detail, they cannot be *leeuwendaalders*, because all the silver in the estate is deemed to be worth 7 shillings 6 pence New York money for each troy ounce—which is the valuation for Spanish plate at a fineness of .9305, and not that for the debased *leeuwendaalders* at a fineness of .750.

The Colony of New York used Spanish silver ("plate"), .9305 fine silver, as its monetary standard. Although *leeuwendaalders* are only .750 fine, they were so common in circulation that New York promulgated an exchange rate for the equivalent in Spanish plate. *Leeuwendaalders* officially weigh 27.68 grams, but Arent Pol found in his study of the Qabatiya hoard that *leeuwendaalders* in circulation only weighed 26.92 grams (Taha, Van der Kooij, and Pol 2006, 61); in 1720, New York passed a law setting a minimum acceptable weight for *leeuwendaalders* at 26.438 grams, which, at .750 fine, would be equal to 19.829 grams of pure silver. New York deemed that each *leeuwendaalder* would be equivalent to 21.384 grams (13 pennyweight 8 grains) of Spanish plate, or 19.898 grams of pure silver, thus overvaluing the *leeuwendaalder* slightly. *Leeuwendaalders* and half-*leeuwendaalders* were thus rated by tale at 21.384 grams of Spanish plate equivalent for each *leeuwendaalder*, and 10.692 grams for each half-*leeuwendaalder*. Standard phraseology was inserted in New York laws when money was being levied or expended, to this effect: "the Sum of X ounces of plate of Spanish Coyns of Sevil Pillar or Mexico or the Value thereof in Lyon Dollars or half Dollars at thirteen penny Weight eighteen Grains each Dollar or in Bills of Credit made Current in this Colony" (*Colonial Laws* 1894, 1: 1013).

This exchange rate was specifically mentioned in laws passed by the Colony of New York in every year from 1710 through 1715 inclusive, and again in 1719 (*Colonial Laws* 1894, 1: 711, 749, 750, 753, 754, 788, 761, 779, 812, 814, 847, 1013). In 1720 the Colony revalued the *leeuwendaalder* upwards, deeming it equivalent to 23.328 grams of Spanish silver, or 21.707

grams of pure silver ("15 grains of plate" is the statutory language), a significant overvaluation; this new valuation was repeated in tax and expenditure laws passed in 1722 (*Colonial Laws* 1894, 2: 5, 17, 92–93). This overvaluation was a reaction to a time when hard money was even scarcer than usual. In 1723, Cadwallader Colden, then the Surveyor General of the Colony of New York, provided this account of the currency situation: "But whatever advantages we have by the West India Trade we are so hard to put it to make even with England, that the money imported for the West Indies seldom continues six months in the Province, before it is remitted for England The Current Cash being wholly in the Paper Bills of this Province & a few Lyon Dollars" (NYCD 1855, 5: 686).

In his history of New York, William Smith wrote "The Money used in this Province is Silver, Gold, British Halfpence and Bills of Credit. To counterfeit either of them is Felony without Benefit of Clergy; but none except the latter, and Lyon Dollars are a legal tender" (Smith 1757, 216). Note that William Smith is not saying that *leeuwendaalders* were in circulation in New York in 1756; he says that silver, gold, British halfpence, and bills of credit are used, and that *leeuwendaalders* are a legal tender. Smith based his history on his compilation of the laws of New York from 1691 through 1752, and when consulting the laws he would have come across the same statutes that are discussed here, which make *leeuwendaalders* a legal tender. These laws dated from several decades earlier but were still in effect, even though it seems likely that *leeuwendaalders* were no longer in extensive circulation in 1756.

In May 1768, New York's governor, Sir Henry Moore, reported to Wills Hill, the Earl of Hillsborough, that "the Lyon Dollars (a species of Money brought here by the first Dutch Settlers) are rarely now seen" (NYCD 1857, 8: 72). This statement is evidence, on its face, that *leeuwendaalders* had been introduced to Nieuw Amsterdam by the Dutch, but Sir Henry was writing more than a century after the end of Dutch Nieuw Amsterdam, and so his explanation of the origin of the *leeuwendaalders* was sheer conjecture. I have come across no evidence, when reading through the written materials of the Dutch period, for the circulation of *leeuwendaalders*. Sir Henry's statement is, however, good evidence that *leeuwendaalders* had largely disappeared from circulation by 1768.

In his *Autobiography*, Benjamin Franklin wrote that upon his arrival in Philadelphia from Boston via New York in 1723, "my whole stock of cash consisted of a Dutch dollar, and about a shilling in copper" (Franklin 1944, 30). Franklin wrote this section of his autobiography while residing in Twyford, Hampshire, England, and uses sterling values elsewhere in this section of his book; presumably he means a sterling shilling, and not the shilling of the monies of account of Pennsylvania, New York, and Massachusetts, so a shilling's worth of copper would be 24 halfpence. Franklin says that he gave the copper to the boat in which he arrived for his passage, but he probably kept a few halfpence back, for shortly after that he bought threepence worth of bread from a baker, and it does not seem that he had the Dutch dollar exchanged in order to do this. Franklin is emphasizing his poverty on arrival in Philadelphia, in contrast to his later prosperity: His stock of money consisted of some copper, not a single gold coin, and the only silver coin is a *leeuwendaalder*, which is heavily debased with copper. But where did Franklin obtain these coins? They did not come from Philadelphia circulation, for he was fresh off the boat from Burlington, New Jersey. He probably did not obtain the coins in Boston, for, as he tells us later (and as will be discussed further below), only paper was circulating in Massachusetts, and no coins. The likeliest explanation is that he obtained the coins in New York City, or possibly during his trip across New Jersey. Thus Franklin's *Autobiography* can be cited as another example for the circulation of *leeuwendaalders* in New York City, in this case in 1723.

Scott reports one counterfeiting case involving *leeuwendaalders* from New York: In December 1723, three men were arrested in Kingston, in Ulster County, New York, for passing false *leeuwendaalders* (Scott 1953, 21).

i. Massachusetts

A deposition made in Massachusetts on July 29, 1701, stated that Dog or Lion dollars had been counterfeited (Felt 1839, 250).

III. *Leeuwendaalders* circulated throughout the mainland colonies of North America, except for New England

There are statutes or proposed legislation setting the price for *leeuwendaalders* from seven (SC, NC, VA, MD, PA, NJ, NY) of the thirteen colonies. The heyday of *leeuwendaalders* lasted only until about 1733, and so it is understandable that the thirteenth colony, Georgia, which was founded in 1732, did not need to pass a statute concerning them. Delaware at this period was only semi-independent of Pennsylvania, so Pennsylvania's statutes presumably covered Delaware as well. But why are there no statutes from New England?

The evidence for circulation in New England is one single find, one famous hoard (Castine), and a 1701 report of counterfeiting. The single find, a *leeuwendaalder* of 1655 found in Portland, Maine, in 1849 presents the usual problems with single finds; it could have been lost in 1655, it could have been lost the day before yesterday in 1849. It will therefore be omitted from consideration. The Castine Deposit, adopting the early date of 1704 and its association with Baron Castin, actually tells us more about the monetary situation of French Canada and the French fur trade than about coinage in New England. The 1701 report of counterfeiting, however, has to be accepted as evidence of circulation in Massachusetts. The question remains why, outside of that one instance, there is no solid evidence of circulation in New England.

Benjamin Franklin's *Autobiography* gives the answer. In May 1724 Franklin returned to Boston, flushed with his success in Philadelphia; one of the journeymen printers asked about what type of money was used in Philadelphia: "One of them asking what kind of money we had there, I produc'd a handful of silver, and spread it before them, which was a raree-show they had not been us'd to, paper being the money of Boston" (Franklin 1944, 35–36).

Massachusetts and the other colonies in New England in this period issued much paper money. As a result of the Massachusetts issue of £50,000 in paper money in 1711 "silver began to be hoarded by some, and exported by others in large quantities, and the bills became the only measure and instrument by which all private trade and dealings were regulated and managed" (Davis 1900, 100). In June 1715, the Massachusetts Assembly said that coin had been exported to such an extent that the only medium of exchange was the bills of credit (Davis 1900, 55). In November 1737 Governor Jonathan Belcher of Massachusetts reported that there was no gold and silver in the province (Davis 1900, 127). Massachusetts's issues of paper money were imitated by New Hampshire, Connecticut, and Rhode Island, with Rhode Island becoming an especially aggressive issuer. These large issues of paper drove gold, silver, and even copper out of circulation. It was not until 1749/50, when Massachusetts was compensated for its costs of the Louisbourg expedition in silver and copper that the colony could redeem its paper currency and adopt a metallic currency (Davis 1900, 238–252; see also NFA 303). Thus with the exception of some circulation of *leeuwendaalders* in the earliest part of the period (1701), for most of the heyday of *leeuwendaalders* (through 1733) they did not circulate in New England, because no silver of any kind was in common circulation in New England in that period.

IV. North America's Sources for *Leeuwendaalders*

Where did North America obtain these *leeuwendaalders*? The major flow of silver bullion in the seventeenth and eighteenth centuries was an eastward flow. Silver was mined in Peru and Mexico; it then entered the trade of the Caribbean and North America; from there it passed to Britain and the Netherlands; the East India Companies (especially the VOC and the English East India Company, EIC) would ship the silver onwards to India, Indonesia, and China (Peterson 1975; Kleeberg 2000, 1166–1167). Another silver flow, going westward, was the Manila Galleon's crossing of the Pacific (Schurz 1939; Kleeberg 2000, 1166). Here, however, is a silver flow that traveled in the reverse direction from the main flow, namely westward across the Atlantic. How can it be explained?

The immediate source of *leeuwendaalders*—and of the Arabian *chequins* (*altins*) (Chalmers [1893], 397; Mossman 1993, 69, 157)—was an important trade between East Africa and colonial North America, namely the Madagascar trade. Complicating the analysis of this trade is the attribution of much of this trade to piracy (Deschamps 1949; Deschamps 1960, 76–78; Brown 1978, 72–91), partly because of the fame of Captain William Kidd (Ritchie 1986) and partly because the EIC claimed that all interlopers into its trading area in the Indian Ocean were pirates (Platt 1969, 550 n. 6, 552–553; Judd 1971). When Giles Shelley, the master of a ship called the *Nassau*, returned to New York City from a trip to Madagascar that lasted from June 1698 through June 1699, with 12,000 8-reales and 3,000 *leeuwendaalders*, the governor, the Earl of Bellomont, concluded that this silver treasure must be the profits from piracy (NYCD 1854, 4: 542, 551). The circulation of Arabian *chequins* in New York in the same period was attributed to the same source; as Bellomont wrote, “Captain Giles Shelly who came lately from Madagascar with 50 or 60 pirates has so flushed them at New Yorke with Arabian Gold and East India goods, that they set the government at defiance” (NYCD 1854, 4: 542, 551).

Giles Shelley was put on trial for trading with pirates; he was convicted, but subsequently pardoned (Ritchie 1986, 295n.3). Stephen de Lancey and the other New York merchants who had backed Shelley's voyage then rewarded him with a silver tankard, made by the New York silversmith Gerrit Onckelbag, depicting Shelley's coat of arms (Shelley's arms bear, somewhat unimaginatively, three shells), and, on the lid, an engraving of a thirty-two gun ship, probably the *Nassau*. This silver tankard is now part of the collection of New York City's Metropolitan Museum of Art (item number 33.120.517).

The Margaret, a ship equipped for the Madagascar trade by the New York merchants Frederick Philipse (originally Frederik Vlijpse from Bolsward in Friesland) and his son Adolph, was stocked with the manufactures and agricultural products that Europe and North America could produce cheaply and for which there was a strong demand in Africa: Guns, pistols, knives, flints, cloth, mirrors, thimbles, scissors, ivory combs, buttons, cotton for candlewicks, thread, needles, tobacco pipes and boxes, hats and pumps (i.e. leather high-heeled shoes, which in the seventeenth century, following a fashion set by the French king Louis XIV, were worn by both men and women), beads, brass neck collars, arm rings, sugar, lead, tar, peas, salt, beer, Madeira wine, rum, lime juice, gunpowder, silk stockings, silver thread buttons, ribbons and colored cloth. The return freight was slaves, nutmegs, cloves, saffron, dyes, broadcloth, pots, textiles, rice, tin, copper, brass, and “all coynes in the Universe” (Judd 1971, 372). The majority of these “coynes” comprised 2,000 gold Arabian *chequins*, 9,800 Spanish 8-reales, and 7,500 *leeuwendaalders*. At the end of 1699 an EIC ship seized the Margaret at the Cape of Good Hope on the false accusation of piracy; actually, the EIC wanted to prevent private traders from venturing into the Indian Ocean and accused all its competitors of being pirates. The Philipses had to engage in years of litigation in the English courts to get their property back, which is how we know the contents of their ship (Judd 1971).

The cargo of the *Margaret* is quite revealing. Some of the products can be classified as coercive items, used to capture slaves: Guns, pistols, gunpowder, knives, flints, brass neck collars and maybe also arm rings. Other products are ships' supplies: Tar, peas, salt, beer, rum, and lime juice (indicating that as early as 1699 the Philipses and their customers understood how to prevent scurvy). The return freight was equally revealing. Nutmegs and cloves could only be obtained by direct or indirect trade with the VOC, for the VOC had a monopoly on the world production of nutmegs, cloves, and mace (Boxer 1965, 198–199; Glamann 1981, 91–111; Israel 1989, 73).

Some of the silver may indeed have been profits from piracy, as Bellomont claimed, but this seems to have been a false accusation. Although Kidd himself was guilty of piracy, the other trading captains proved not to be: The Philipses were acquitted (Judd 1971) and Giles Shelley was convicted not of piracy, but of trading with pirates (Ritchie 1986, 295n.3). The source of the silver was not piracy but a complicated change in trade patterns. There was a temporary surplus of silver in the Indian Ocean area because of the trade between the VOC and Safavid Iran. The VOC had originally been admitted by the Safavid shahs to carry out a balanced trade: Iran would export silk, and the VOC would import spices from Indonesia (Matthee 1999, 115–118). However, by the mid-seventeenth century the VOC could no longer profit from silk exports, so it smuggled out Iranian silver instead (Matthee 1999, 147, 156–157, 173–174). The declining Safavid Empire could not stop this massive hemorrhage of silver exports (Matthee 1999, 157). Another reason for a temporary silver surplus was the chaos in China during the declining years of the Ming Dynasty (succeeded by the Qing Dynasty, 1644) (Matthee 1999, 157), which reduced the exports of tea and temporarily shut down the porcelain kilns at Jingdezhen in Jiangxi. From 1659 until 1682, no porcelain could be obtained from China (Boxer 1965, 174–175). In normal years, silver was drained off to China to pay for tea and porcelain; now this drain ceased. Substitutes filled the gap: 1640–1740 was the heyday of Dutch Delftware, a tin-glazed pottery in blue and white that resembles (but is not as good as) Chinese porcelain (Boxer 1965, 175). The VOC, always quick to promote deceptive substitutes for quality goods, exported stone-paste ceramics from Safavid Iran, which it sold in lieu of the better, but unavailable, Chinese porcelain. Iranian stone-paste exported by the VOC reached Europe, India, Ceylon and the Far East (Carswell 2000, 150). The VOC used this surplus of silver to purchase coffee at the port of Mocha on the Red Sea (Glamann 1981, 188–206; Israel 1989, 338). The Ottoman Empire, for its part, needed to import slaves. During its years of territorial expansion, the Ottoman Empire had obtained slaves by capturing them in war. But after the siege of Vienna in 1683, the Ottoman Empire was in constant retreat, and slaves were obtained not through war, but through purchase (Toledano 2011, 25–26). A major source of slaves on the east coast of Africa was the island of Madagascar, where sundry kingdoms were locked in war. The prisoners of war could then be sold off as slaves (Vernet 2003, 76–77, 94). A vicious circle encouraged Madagascar slave-trading: The kingdom that sold off the most slaves could buy more guns and gunpowder from the slave traders, and the kingdom with the most guns could take the most prisoners and then sell the most slaves (Armstrong 1983–1984, 221). The slaves were purchased by the slave-trading, Swahili-speaking city-states of the East African coast and by Omani traders, and then sold into slavery in the Ottoman Empire (Vernet 2003, 88–93).

American slave traders used Madagascar as a source for slaves beginning in the 1670s, because slaves could be purchased for only 10 shillings a head in Madagascar as opposed to £3–£4 on the west coast of Africa (Platt 1969, 549); but the lengthened Middle Passage increased mortality and morbidity, so that the voyages were not consistently profitable. In the case of one slave ship, which arrived at Virginia from Madagascar in the spring of 1721, the slaves turned out to be unsalable because of "a distemper in their Eyes," and for "some the Eye Balls came out" (Platt 1969, 567–568). American slave traders shifted from purchasing

slaves directly from Madagascar and elsewhere in East Africa to supplying the goods required by Omani and the slave traders of the Swahili Coast; in exchange, the Americans received the Arabian *chequins*, the Spanish *reales*, and the *leeuwendaalders* that were flowing out of the Ottoman Empire (Judd 1971; Ritchie 1986, 113–116).

To summarize this complex series of trades:

- (1) The VOC trades spices for silver from Safavid Iran;
- (2) Chaos in China because of the fall of the Ming Dynasty lessens the silver drain and also permits the VOC to make money by selling Delftware and Iranian stone-paste as a substitute for Chinese porcelain;
- (3) The VOC uses its net silver surplus to purchase coffee from Mocha on the Red Sea in the Ottoman Empire;
- (4) The Ottoman Empire purchases slaves from Omani and other East African slave traders, using Spanish *reales*, *leeuwendaalders* and Arabian *chequins*;
- (5) The Omanis and other East African slave traders purchase trading goods used in the slave trade directly or indirectly from American slave traders, for Spanish *reales*, *leeuwendaalders* and Arabian *chequins*;
- (6) American slave traders bring Spanish *reales*, *leeuwendaalders* and Arabian *chequins* back to New York City.

The end of this westward bullion flow appears to have occurred sometime after 1720, as a result of the following developments:

- (1) The sack of Isfahan by the Afghans in 1722 marks the end of the Safavid Empire, and the VOC could no longer count on Iran as source of silver;
- (2) The revival of Chinese exports of porcelain and tea under the Qing Dynasty and especially the Qianlong Emperor (1735–1796) increases the silver drain;
- (3) The VOC was successful at transplanting coffee trees from Mocha to its colonies on Ceylon and Java (so successful that Java is now a synonym for coffee) (Glamann 1981, 188–211; Pendergrast 1999, 7–8). In 1721 90% of the coffee imported by the VOC to Europe came from Mocha, and 10% from Java; a mere five years later, those proportions were reversed (Boxer 1965, 199) and the Ottoman Empire lost its monopoly on coffee exports;
- (4) American slave traders abandoned the Madagascar trade because of its uncertain profitability;
- (5) Well-struck milled pillar dollars became widely available following the introduction of machinery at the mints of Spanish America from 1732 onwards, which replaced the hammer struck cobs and the *leeuwendaalders*.

V. The Proportion of *Leeuwendaalders* in the Circulation of the English Colonies

Although *leeuwendaalders* did circulate in the North American colonies, their numbers were dwarfed by Spanish-American silver. *HMS Feversham*, which provides us with a “snapshot” of

the coinage in circulation in New York City in 1711, had only 23 half- and whole *leeuwendaalders*, compared to 1,107 pieces of Spanish-American silver. Comparing silver crowns to silver crowns there were 14 whole *leeuwendaalders*, compared to 108 8-reales. In the only other find that is well enough documented to give us some idea of the proportion of the coinage, the Castine Deposit of 1704, which has a total size of about 2,000 silver coins, the *leeuwendaalders* were a tiny proportion compared to the French écus, of which 1,000 were present in the hoard. In the Madagascar trade, however, the proportion could shift dramatically, even though Spanish 8-reales always remained in the majority. Giles Shelley had 12,000 8-reales (80%) and 3,000 *leeuwendaalders* (20%) on the *Nassau*. The silver "coynes" found on the Philipses' ship *Margaret* in 1699 were 9,800 8-reales (57%) and 7,500 *leeuwendaalders* (43%). Thus among silver coins accumulated by merchants engaged in the Madagascar trade, the proportion of *leeuwendaalders* could rise from 20% to over 40%.

VI. The Importance of a Debased Coinage in the Circulation of the English Colonies

The North American colonies could not keep good quality Spanish plate in circulation, for it would soon be drawn off to London. However, an underweight or debased coinage, since it did not readily fit into the international silver standard, could remain in circulation for a longer time. The first such underweight coinage was the Massachusetts silver, nominal shillings that were 22.5% lighter than English shillings. Once the turmoil of the Potosí debasement was overcome and merchants knew what coins they could trust and how much to discount a debased Potosí coin so as not to be cheated, the debased Peru coins played a small but not unimportant role in the colonial money supply. When the *leeuwendaalders* entered North American circulation via the Madagascar trade, they, too, could stay in circulation longer because they were debased. The role of a debased silver coinage, which was filled in the seventeenth century and early eighteenth century successively by the Massachusetts shillings, the Peruvian 8-reales, and the *leeuwendaalders*, would be filled in a massive way, in the middle and later eighteenth century, by the plata provincial 2-reales, i.e. the pistareen and its fractions (Kleeberg 1998; Kays 2001). The *leeuwendaalder* also served a useful purpose in securing the monetary stability of New York. The War of the Spanish Succession caused both an interruption of silver supplies from Spanish America (see Philips 2007, 50–55, 109, on the interruptions to the fleet system during the war) and an increase in military expenditures. New England met this crisis with a pure paper currency, which resulted in rapid inflation (Davis 1900, 89–93). In New York and the colonies to its west and south, the debased *leeuwendaalder* supplied the needed expansion in the money supply, yet without the rapid inflation of a purely paper economy.

VII. Conclusion

Between 1693 and 1733 *leeuwendaalders* circulated over almost the entire Eastern Seaboard—from South Carolina to New York. A significant exception to this area of circulation was New England, where the massive issues of paper money during the first half of the eighteenth century drove all silver coinage out of circulation. By 1768 *leeuwendaalders* were rarely encountered in circulation. It has been assumed that *leeuwendaalders* circulated in New York because New York was at one time a Dutch colony, but this is not true. *Leeuwendaalders* entered the circulation of North America because of the Madagascar trade, where North American merchants provided supplies to the slave traders of East Africa, Arabia, and the Ottoman Empire; the return freights included *leeuwendaalders*, the leading circulating medium in the Ottoman Empire.

**Evidence for the Circulation of *Leeuwendaalders*
Arranged by Colony, from South to North¹**

(References that are rejected as atypical are marked with an asterisk[*])

Colony	Locality	Date	Evidence	Source
Antigua		1699	Legislation	Chalmers [1893], 67.
SC		1693	Letter	NYCD 1854, 4: 1134.
SC		1695	Legislation	Cooper 1837, 2: 95.
SC		1700	Letter	NYCD 1854, 4: 699.
NC		1693	Letter	NYCD 1854, 4: 1134.
NC		1715	Legislation	Clark 1904, 23: 80.
VA	Accomac	1697	Legislation	Palmer 1875, 1: 52.
VA		1708	History	Oldmixon 1708, 316.
MD		1708	Legislation	Browne 1907, 351.
MD	Annapolis	1718	Burglary	Ellefson 2007, 169–170.
PA		1693	Letter	NYCD 1854, 4: 1134.
PA		1700	Legislation	Mitchell and Flanders 1896, 2: 88.
PA		1706	Legislation	Mitchell and Flanders 1896, 2: 276–278.
PA	Philadelphia	1730	Counterfeit	Scott 1955, 149.
PA	Philadelphia	1733	Counterfeit	Scott 1955, 28.
NJ	West NJ	1693	Legislation	Lee 1892–1893, 33.
NJ	Elizabeth	1694	Hoard	NFA 161.
NJ	Elizabeth	1698	Counterfeit	Edsall 1937, 311–312.
NY		1693	Legislation	NYCD 1854, 4: 1134.
NY	New York	1699	Letter	NYCD 1854, 4: 542, 551.
NY		1708	Legislation	NYCD 1855, 5: 66–68, 71; <i>Colonial Laws</i> 1894: 1: 620–621.
NY		1709	Currency	Newman 2008, 272.
NY		1710	Legislation	<i>Colonial Laws</i> 1894, 1: 711.
NY	New York	1711	Shipwreck	NFA 185.
NY		1711	Legislation	<i>Colonial Laws</i> 1894, 1: 749, 750.
NY		1712	Legislation	<i>Colonial Laws</i> 1894, 1: 753, 754, 761.
NY		1713	Legislation	<i>Colonial Laws</i> 1894, 1: 779, 788.
NY		1714	Legislation	<i>Colonial Laws</i> 1894, 1: 812, 814.
NY		1715	Legislation	<i>Colonial Laws</i> 1894, 1: 847
NY		1719	Legislation	<i>Journal</i> 1861, 1: 448; <i>Colonial Laws</i> 1894, 1: 1013.
NY		1720	Legislation	<i>Journal</i> 1861, 1: 454; <i>Colonial Laws</i> 1894, 2: 5, 16–17.
NY		1722	Legislation	<i>Colonial Laws</i> 1894, 2: 92–93.

¹ Maine is listed although it was part of Massachusetts until 1820.

NY	New York	1723	Memoir	Franklin 1944, 30.
NY*		1757	History	Smith 1757, 216.
NY*		1768	Letter	NYCD 1857, 8: 72.
NY	Kingston	1723	Counterfeit	Scott 1953, 21.
MA		1701	Counterfeit	Felt 1839, 250.
ME*	Portland	1655	Single find	NFA 99.
ME*	Castine	1704	Hoard	NFA 178.

**Evidence for the Circulation of *Leeuwendaalders*
Arranged Chronologically**

(References that are rejected as atypical are marked with an asterisk[*])

Date	Colony
1655*	ME
1693	SC, NC, PA, NJ, NY
1694	NJ
1695	SC
1697	VA
1698	NJ
1699	Antigua, SC, PA, NY
1700	SC, PA
1701	MA
1704*	ME
1706	PA
1708	VA, MD, NY
1709	NY
1711	NY
1712	NY
1713	NY
1714	NY
1715	NC, NY
1718	MD
1719	NY
1720	NY
1722	NY
1723	NY
1730	PA
1733	PA
1757*	NY
1768*	NY

Abbreviations

EIC = English East India Company

GWC = *Geocroyerde Westindische Compagnie* (Dutch West India Company)

NFA = *Numismatic Finds of the Americas*: Kleeberg, John M. 2009. *Numismatic Finds of the Americas. An Inventory of American Coin Hoards, Single Finds, Shipwrecks and Finds in Excavations*. Numismatic Notes and Monographs 169. New York: American Numismatic Society.

NYCD = *New York Colonial Documents*: O'Callaghan, E. B., and Berthold Fernow. 1853–1887. *Documents Relative to the Colonial History of the State of New-York; Procured in Holland, England, and France*. Albany: Weed, Parsons & Co.

VOC = *Vereenigde Oost-Indische Compagnie* (Dutch East India Company)

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NFA. See Kleeberg.

NYCD. See O’Callaghan.

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FUGIO COPPERS IN THE COLLECTION OF THE AMERICAN NUMISMATIC SOCIETY

Plate V
(Newman 15-Y to 22-M)
by
Oliver D. Hoover; Burlington, Ontario¹

Introduction

On April 21, 1787, the Continental Congress established a contract for producing a national copper coin in an attempt to combat the flood of lightweight counterfeit coppers that were damaging the economy. In the same year, on July 6, it was resolved that the new coin should weigh 157.5 grains and feature designs created by Benjamin Franklin for the Continental Currency dollar and fractional paper money in 1776. The obverse depicts a sundial with the mottos, FUGIO ("I [viz. Time] Fly") and MIND YOUR BUSINESS, while thirteen linked rings, symbolizing the thirteen United States and the legend UNITED STATES, WE ARE ONE appear on the reverse.

Thanks to a large bribe to the head of the U.S. Treasury Board, the contract was awarded to James Jarvis, who was also involved with the production of Connecticut coppers. Jarvis had the dies cut by the Connecticut die maker, Abel Buell, but then found that he could only obtain locally thirty of the three hundred tons of copper he was required to convert into coin. He attempted to find the needed copper in England, while leaving his father-in-law, Samuel Broome, in charge of the minting operation. Broome used about four tons of the metal to produce some 400,000 FUGIO coppers, but used the remainder to produce lighter and more profitable Connecticut coppers. When the Congress discovered what had happened, it voided the contract on September 16, 1788, and subsequently resolved to seek restitution. Jarvis wisely decided to remain in Europe. His father-in-law soon joined him there after selling the mint equipment to the New York coiner and counterfeiter, Thomas Machin. Abel Buell also seems to have fled the United States after passing his tools on to his son, Benjamin.

The ANS collection of FUGIO coppers presently consists of some 59 specimens (not including restrikes and electrotypes). Fourteen of these were donated to the Society by the Bank of New York, in 1949. These coins come from the so-called Bank of New York hoard, consisting of a keg of FUGIO coppers obtained by the bank in 1788, but which was forgotten until 1856 and then again until 1926. In 1948, members of the ANS were permitted to study the remaining 1,641 pieces. Another 10 specimens were donated by Edward R. Barnsley, who is perhaps best known for his superlative collection of Connecticut coppers. The remaining part of the ANS FUGIO collection evolved organically over time.

Four of the coins in this fifth plate in a series to fully publish the FUGIO coppers in the ANS cabinet come from the 1963 Barnsley donation (Nos. 41, 44, 47–48). One coin (No. 49) was donated by D. Proskey in 1914, along with a bar cent and a Belgian medal. In 1962, coin no. 46 was purchased from the collection of Yale University. The remaining three coins entered the ANS cabinet in the 1970s. Coin no. 43 was purchased from the collection of the American Philosophical Society Library in 1973 and no. 45 from the collection of Harvard University's Fogg Art Museum. Coin no. 50 was donated by Henry Grünthal in 1975, along with a large group of Canadian blacksmith tokens and counterfeit British halfpence. Grünthal was a well-educated German numismatist who became Assistant to the Chief Curator of the ANS in 1953

¹ The commentary and catalog have benefited from discussion with Philip Mossman and Jeff Rock.

and went on to serve as Curator of European and Modern Coins. This donation was made after his retirement in 1973.

In the variety sequence Newman 15-Y to 22-M, the ANS currently lacks examples of 16-H, 17-I, 17-S, 17-T, 17-WW, 18-U, 20-R, 20-X and 21-I. The Society is also missing the later die varieties 23-ZZ, 24-MM, and 25-PP.

Catalog

Obv. *FUGIO.* / *1787*. Sun shining on sundial. In exergue, MIND◆YOUR◆◆BUSINESS.

Rev. UNITED * STATES * on raised ring. Within, WE ARE ONE. Thirteen linked rings inscribed with the names of the original United States.

Newman 15-Y

41. 28mm, 159.2 grains. ANS 1963.103.7.

Newman 16-N

42. 28mm, 150.0 grains. ANS 1931.58.536.

43. 28mm, 163.8 grains. ANS 1973.177.25.

Newman 18-X

44. 28mm, 164.0 grains. ANS 1963.103.8.

Newman 19-M

45. 28mm, 166.4 grains. Holed. ANS 1977.135.525.

Newman 19-Z

46. 28mm, 132.26 grains. ANS 1962.32.4.

47. 28mm, 154.7 grains. ANS 1963.103.10.

Newman 19-SS

48. 28mm, 148.46 grains. ANS 1963.103.9.

Newman 22-M

49. 28mm, 129.7 grains. ANS 1914.32.1.

Unidentifiable

50. 28mm, 145.3 grains. ANS 1975.117.5.

FUGIO COPERS IN THE COLLECTION OF THE AMERICAN NUMISMATIC SOCIETY

Plate V
(Newman 15-Y to 22-M)



41



42



43



44



45



46



47



48



49



50



CONNECTICUT COPPERS IN THE COLLECTION OF THE AMERICAN NUMISMATIC SOCIETY

Plate X: 1786
(Miller 1-A to 2-A.1)
by
Oliver D. Hoover; Burlington, Ontario¹

Introduction

The Confederation period copper coinage of the state of Connecticut was legally struck in New Haven by the Company for Coining Coppers from November 12, 1785, to June 1, 1787. From June 1, 1787, to the Fall of 1788, Connecticut coppers continued to be struck by James Jarvis and Company. The types essentially consisted of modified versions of the royal bust obverse and Britannia reverse familiar from contemporary English halfpence. The Latin regal legends were replaced by new ones that identified the coppers as being issued by the authority of Connecticut (AUCTORI CONNEC) and advertised American independence and liberty (INDE ET LIB). This coinage was popular, spawning imitative issues struck for Vermont and numerous illegal counterfeits. The problem of counterfeiting combined with apparent mint irregularities led to a state inquest in January of 1789. On June 20, 1789, the right to produce state coppers for Connecticut was officially terminated by the federal government.

The collection of Connecticut coppers maintained by the American Numismatic Society may be one of the most complete in existence and contains the vast majority of the die varieties recorded in Henry C. Miller's *The State Coinage of Connecticut* (New York, 1920). The Society's Connecticut holdings are so extensive due to two major gifts in the early twentieth and twenty-first centuries. In 1931, the Frederick Canfield collection of Connecticut coppers (285 pieces) was loaned and subsequently donated to the ANS by the New Jersey Historical Society. In 2005, the American Numismatic Society acquired the Connecticut collection of Edward R. Barnsley (1131 pieces) thanks to the generosity of James C. Spilman and the Colonial Newsletter Foundation.

This tenth plate in a series to fully publish the Connecticut coppers in the ANS cabinet is entirely composed of coins from the Barnsley/CNLF gift except for one from the Canfield collection (No. 98). As is typical, the Canfield pieces has a white painted die variety (PDV) on the obverse giving its Miller number.

¹ The commentary and catalog have benefited from discussion with Randy Clark and Philip Mossman.

Catalog

Obv. Legend as indicated. Laureate and cuirassed bust right, imitating regal halfpence of George III.

Rev. Legend as indicated. Liberty/Columbia/Connecticut seated left on globe, holding olive branch and pole topped by liberty cap; grounded shield with state arms (three grape vines) beside. In exergue, 1786.

Miller 1-A

91. 28mm, 130.2 grains. AUCTORI CONNEC / ET LIB INDE. ANS 2005.37.29.
92. 28mm, 126.8 grains. AUCTORI CONNEC / ET LIB INDE. ANS 2005.37.30.
93. 28mm, 93.2 grains. AUCTORI CONNEC / ET LIB INDE. ANS 2005.37.31.
94. 28mm, 136.4 grains. AUCTORI CONNEC / ET LIB INDE. ANS 2005.37.32.
95. 29mm, 100.6 grains. AUCTORI CONNEC / ET LIB INDE. Double struck. ANS 2005.37.151.
96. 28mm, 136.4 grains. AUCTORI CONNEC / ET LIB INDE. Holed. ANS 2005.37.414.
97. 28mm, 93.8 grains. AUCTORI CONNEC / ET LIB INDE. ANS 2005.37.415.

Miller 2-A.1

98. 28mm, 95.8 grains. AUCTORI• CONNEC• / ET LIB INDE. Painted Miller die variety on obverse (2¹A in left field and M on right). ANS 1931.58.436.
99. 29mm, 93.3 grains. AUCTORI• CONNEC• / ET LIB INDE. ANS 2005.37.33.
100. 28mm, 77.6 grains. AUCTORI• CONNEC• / ET LIB INDE. ANS 2005.37.416.

**CONNECTICUT COPERS IN THE COLLECTION OF
THE AMERICAN NUMISMATIC SOCIETY**

**Plate X: 1786
(Miller 1-A to 2-A.1)**



91



92



93



94



95



96



97



98



99



100



NEW JERSEY COPPERS IN THE COLLECTION OF THE AMERICAN NUMISMATIC SOCIETY

Plate X: 1787 (Maris 38-c to 43-Y)
by
Oliver D. Hoover; Burlington, Ontario¹

Introduction

The partnership of Walter Mould, Thomas Goadsby, and Albion Cox received a two-year contract to produce three million copper coins for the state of New Jersey on June 1, 1786. Their coins carried the obverse type of a horse head and plow derived from the state seal and an American shield on the reverse. The legends give the Latin name of the state (NOVA CÆSAREA) and present the national motto of the United States (E PLURIBUS UNUM) for the first time on any coin. By the Fall of 1786 the partners had fallen into disagreement and divided the coinage quota between a mint operated by Goadsby and Cox at Rahway, near Elizabethtown (now Elizabeth), NJ, and another operated by Mould near Morristown, NJ. Further problems developed in 1788. Mould ceased his involvement with the coinage at this time and Cox faced litigation by his creditors and by Goadsby, which resulted in the seizure of the mint equipment. By the middle of the year, the remainder of the coining contract and the Rahway mint equipment had been obtained by Matthias Ogden, the primary mover behind the New Jersey coinage legislation. Despite having access only to dies dated 1786 and 1787, Ogden continued to strike New Jersey coppers at his barn in Elizabethtown until as late as 1790.

The American Numismatic Society's holdings of New Jersey coppers are extensive, thanks to the New Jersey Historical Society's donation of duplicates from the Frederick Canfield collection (24 pieces) in 1931 and the purchase of a large part of the Harry Prescott Clark Beach collection (829 pieces) from Henry Grünthal in 1945. Grünthal, who had studied numismatics in Germany, later went on to become Assistant to the Chief Curator and Curator of European and Modern Coins at the ANS from 1953 to 1973. Most of the die varieties identified by Edward Maris in *A Historic Sketch of the Coins of New Jersey* (Philadelphia, 1881) may be found in the ANS collection.

On this tenth plate in a series to fully publish the New Jersey coppers belonging to the American Numismatic Society, seven coins (Nos. 92, 94–98 and 100) come from the 1945 Beach/Grünthal purchase. An additional piece (No. 91) was purchased from Henry Grünthal in 1974. Only one coin (No. 93) lacks any provenance information. Coin no. 99 is a Canfield piece and notable for its painted die variety (PDV) on the obverse. To the left of the horse the Maris die variety has been painted on in white. The same hand (probably Canfield's own) has also painted the Crosby number in the right field.

¹ The commentary and catalog have benefited from discussion with Philip Mossman, Roger Siboni, and Raymond Williams.

Catalog

Obv. NOVA CÆSAREA, around. Head of horse right, above plow right; in exergue, 1787.

Rev. *E*PLURIBUS*UNUM*, around. American shield emblazoned with a field of argent, six pales gules, and a chief azure.

Maris 38-c

91. 29mm, 135.0 grains. ANS 1974.177.10.

Maris 39-a

92. 29mm, 146.7 grains. ANS 1945.42.701.
93. 29mm, 149.2 grains. Double struck. ANS 0000.999.28480.

Maris 40-b

94. 29mm, 120.8 grains. Sprigs. ANS 1945.42.702.
95. 29mm, 131.7 grains. Sprigs. ANS 1945.42.703.

Maris 41-c

96. 27mm, 145.6 grains. ANS 1945.42.704.

Maris 42-c

97. 27mm, 156.1 grains. ANS 1945.42.705.
98. 27mm, 145.9 grains. Double struck. ANS 1945.42.706.

Maris 43-Y

99. 27mm, 140.13 grains. Painted Maris die variety (43 Y) in obverse left field. Painted Crosby die variety (4 B) in obverse right field. ANS 1931.58.518.
100. 27mm, 148.6 grains. ANS 1945.42.707.

**NEW JERSEY COPPERS IN THE COLLECTION OF
THE AMERICAN NUMISMATIC SOCIETY**

**Plate X: 1787
(Maris 38-c to 43-Y)**



91



92



93



94



95



96



97



98



99



100



MASSACHUSETTS BAY SILVER IN THE COLLECTION OF THE AMERICAN NUMISMATIC SOCIETY

Plate III: Oak Tree Shillings (Noe 1 to 5 / Salmon 1-A to 3-D)

by
Oliver D. Hoover; Burlington, Ontario¹

Introduction

On May 26–27, 1652, the Massachusetts General Court issued Acts for the establishment of a silver mint in Boston as a measure of protection against the increasing problem of light weight Spanish-American cobs circulating in Massachusetts Bay. The Boston silversmiths, John Hull and Robert Sanderson were appointed to operate the mint. They were required to produce coins of sterling (.925) fineness in English denominations, but at a reduced weight standard of 72 grains to the shilling. The official weight of the contemporary English shilling was 92.9 grains.

Between 1652 and 1682, Hull and Sanderson struck four series of silver coins for Massachusetts Bay. The earliest of these, produced in June–October 1652, consisted of crude, blank planchets marked with two stamps: NE for New England on the obverse and a value mark in Roman numerals on the reverse. Legislation was passed, on October 19, 1652, to abandon this simple design in favor of a more coin-like design produced by full-size dies. The obverse of the new coinage featured a willow tree, while the English legend, MASATHVSETS IN / NEW ENGLAND AN DOM was placed in the border, broken between the obverse and reverse. The 1652 date of the original mint legislation and the value indicator also appeared in the center of the reverse. The willow tree coinage continued in production until c. 1660 or 1662, when the willow on the obverse was replaced by an oak tree. The change in tree was also accompanied by a change in production technology. While the willow tree coinage had been struck by hand, the new oak tree series was struck in a rocker arm press. In c. 1667, the tree was again changed, this time from an oak to a pine. The pine tree coinage—the most enduring of the Massachusetts silver series—was struck until 1682, when the mint contract expired. Hull died the following year. Although sporadic attempts were made to revive the mint until 1690, these were quashed by the restored Stewart kings, Charles II (1659–1685) and James II (1685–1688), and finally put to rest by the increased value of silver and restored confidence in Spanish-American coins at the end of the 1680s.

The cabinet of the American Numismatic Society is home to some 151 authentic pieces of Massachusetts Bay silver of all four series, as well as a large selection (70 pieces) of electrotypes and fakes. The core of the collection is almost certainly the 51 pieces donated by the prominent New York collector, William B. Osgood Field, in 1946. The ANS collection includes most of the varieties identified by Sydney P. Noe in his three major studies: *The New England and Willow Tree Coinage* (1943), *The Oak Tree Coinage of Massachusetts* (1947), and *The Pine Tree Coinage of Massachusetts* (1952), as well as in Christopher Salmon's recent review and reassessment of the coinage, *The Silver Coins of Massachusetts* (2011).

¹ The commentary and catalog have benefited from discussion with Louis Jordan, Philip Mossman, and Christopher Salmon.

This third plate in a series to fully publish the Massachusetts Bay silver coins belonging to the American Numismatic Society features part of the ANS holdings of Oak Tree silver. Seven pieces (Nos. 19–21, 23, and 25–27) come from the Osgood Field donation. Another (No. 24) was donated by A. C. Wyman in 1932. Coin no. 1 was purchased from The T. L. Elder sale held on 2 September 1912. This coin, together with sixteen other Colonial American pieces (primarily New Jersey coppers) and a Byzantine gold *tremissis*, entered the collection at a cost of \$37.45. Another coin (No. 22) was purchased, along with ten other pieces of Oak Tree and Pine Tree silver, from Carl Würtzbach in 1942.

Catalog

Shillings

Noe 1/Salmon 1-A

Obv. Oak tree. MASATHVSETS : IN : around.

Rev. 1652 XII in center. NEWENGLAND : AN · DOM · around.

18. 27mm, 71.9 grains. ANS 1912.37.4.
19. 28mm, 64.0 grains. ANS 1946.89.78.
20. 27mm, 71.0 grains. ANS 1946.89.79.
21. 24mm, 56.1 grains. Clipped. ANS 1946.89.81.

Noe 2/Salmon 1-B

Obv. Oak tree. MASATHVSETS : IN : around.

Rev. 1652 XII in center. NEWENGLAND · ANDO (rosette) around.

22. 28mm, 67.9 grains. ANS 1942.54.7.

Noe 3/Salmon 1-C

Obv. Oak tree. MASATHVSETS : IN : around.

Rev. 1652 XII in center. NEW ENGLAND · AN DO · around.

23. 30mm, 72.0 grains. ANS 1946.89.82.

Noe 4/Salmon 2-D

Obv. Oak tree. MASATHVSETS : IN : around.

Rev. 1652 XII in center. NEW ENGLAND · AN · DOM · around.

24. 26mm, 72.3 grains. ANS 1932.999.299.
25. 28mm, 71.0 grains. ANS 1946.89.83.

Noe 5/Salmon 3-D

Obv. Oak tree. MASATHVSETS : IN : around.

Rev. 1652 XII in center. NEW ENGLAND · AN · DOM · around.

26. 28mm, 69.2 grains. ANS 1946.89.84.
27. 25mm, 71.8 grains. Clipped. ANS 1946.89.85.

**MASSACHUSETTS BAY SILVER IN THE COLLECTION OF
THE AMERICAN NUMISMATIC SOCIETY**

**Plate III: Oak Tree Shillings
(Noe 1 to 5 / Salmon 1-A to 3-D)**



18



19



20



21



22



23



24



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